

**SYSTEM AND METHOD FOR REMOTE DIAGNOSIS
OF DISTRIBUTED OBJECTS**

ABSTRACT

A system for diagnosing disorders of geographically distributed objects from a
5 remote location. Data for a current condition are compared with predefined data
patterns for known disorders to identify a statistically significant match indicating that the
monitored object is presently experiencing the corresponding disorder. A critical
disorder time is forecasted by determining when a threshold value will be reached using
trend analysis of probabilities. A new disorder pattern preceding an observed disorder
10 is added to the knowledge base for future reference. The knowledge base may be used
to diagnose one object based on data collected from a similar object in a geographically
distinct location. Diverse equipment may be conceptually decomposed into a small set
of basic components, and equipment may be diagnosed by analyzing operation of its
basic component(s). Informative data analysis procedures may be automatically
15 selected according to predetermined rules as a function of the monitored equipment's
basic components.